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EXAMINER
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QUINONES, ISMAEL C

ART UNIT	PAPER NUMBER
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2686

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/078,381

**Applicant(s)**

MASUDA ET AL.

**Examiner**

Ismael Quiñones

**Art Unit**

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on February 21, 2002 has being considered by the examiner and made of record in the application file.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Objections***

3. **Claims 2** is objected to because of the following informalities:

In line 3, page 46, the word "aid" is used when --said-- is meant instead.

Appropriate correction is required.

4. **Claims 7** is objected to because of the following informalities:

In line 27, the word "stationor" is used when --station-- is meant instead.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2686

6. The claims in the application have a number of 35 U.S.C. 112 2<sup>nd</sup> paragraph issues, the examiner has listed some of the issues as examples, however it is also the responsibility of the applicant to verify that the claims particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

7. **Claims 1-2 and 5-6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. As regarding **claim 1**, there is more than one issue or limitation, which raise grounds for insufficient antecedent basis. The following are limitations found on the aforesaid claim, which are considered to met with insufficient antecedent basis:

- i. The limitation "said received power" in page 43, lines 8-9. A plurality of measuring received powers are introduced, it is specifically unclear which of those measuring received powers is being refer to.
- ii. The limitation "said power control signals" in page 43, lines 15-16.

9. **Claim 2** recites the limitation "the measured received power" in page 44, line 21. There is insufficient antecedent basis for this limitation in the claim. A plurality of measuring received powers are introduced, it is specifically unclear which of those measuring received powers is being refer to.

10. **Claim 5** recites the limitation "the measured received power" in page 47, lines 9-10. There is insufficient antecedent basis for this limitation in the claim. A plurality of measuring

Art Unit: 2686

received powers are introduced, it is specifically unclear which of those measuring received powers is being refer to.

11. **Claim 6** recites the limitation "the measured received power" in page 49, line 3. There is insufficient antecedent basis for this limitation in the claim. A plurality of measuring received powers are introduced, it is specifically unclear which of those measuring received powers is being refer to.

12. **Claims 1-2 and 6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Regarding **claim 1**, the limitation "the own base station" in page 44, line 1, it is unclear if said limitation is referring to own base station transmission power or the selected base station identified by an identification code. For purposes of applying prior art, said limitation will be examined as the selected base station identified by an identification code in accordance with the specification of the present application. Furthermore regarding the aforesaid claim, the limitation "giving an instruction increase the transmission power to said power control signal to stop said power control signal to the terminal station" in page \*\*, line \*\* is unclear if said limitation is referring to transmit an instruction for stop power transmission, stop an instruction for decreasing transmission power or transmitting an increase power instruction. For purposes of applying prior art, said limitation will be examined as the selected giving an instruction to increase the transmission power.

Art Unit: 2686

b. Regarding **claim 2**, the limitation “indicates the own base station” in page 45, line 18, it is unclear if said limitation is referring to own base station transmission power or the selected base station identified by an identification code. For purposes of applying prior art, said limitation will be examined as the selected base station identified by an identification code in accordance with the specification of the present application.

c. Regarding **claim 6**, the limitation “indicates the own base station” in page 49, line 26, it is unclear if said limitation is referring to own base station transmission power or the selected base station identified by an identification code. For purposes of applying prior art, said limitation will be examined as the selected base station identified by an identification code in accordance with the specification of the present application.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 2686

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

16. **Claims 1, 5, and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamabe (U.S Pat. No. 6,405,021) in view of Mochizuki (U.S. P.G.-Pub. No. 2002/0082038).

Regarding **claim 1**, Hamabe discloses a method of controlling transmission power of a terminal station in a wireless communication system including a plurality of base stations and a plurality of terminal stations (*Fig. 7*), each of said plurality of base stations, for measuring received powers of radio waves transmitted from said plurality of terminal stations (*Fig. 11, items 13-16*) and, when said received power is higher than a first threshold value, instructing the terminal station which has transmitted said radio wave to decrease the transmission power (A first control command for reducing power transmitted to a mobile station after determining that a measured signal interference ratio from the mobile station is greater than a target signal interference ratio; *col. 13, line 57 thru col. 14, line 38*), and each of said plurality of terminal stations, for decreasing the transmission power when at least one power control signal which gives an instruction to decrease said transmission power exists in said power control signals transmitted from the plurality of base stations (Producing a first control command signal for

Art Unit: 2686

reducing power and transmitting such to a mobile station; *col. 13, line 57 thru col. 14, line 38*), increasing the transmission power when said power control signal for giving an instruction to decrease the transmission power does not exist (If all first control commands transmitted from the base stations to a mobile station undergoing handoff are for increasing transmission power, that is whose signal to interference ratios are greater than a reference level, then the mobile station increases transmission power; *col. 13, line 57 thru col. 14, line 38; col. 17, lines 33-44*), comparing received powers of radio waves transmitted from said base stations with each other (Each base station transmitting perch channel signals, and the mobile stations measuring the power of the perch channel signals; *col. 12, lines 13-18*), selecting the base station which has transmitted the radio waves with the highest power (*col. 12, lines 39-52; col. 13, lines 7-14*), wherein in the case where the received power of the radio waves transmitted from the terminal station indicates the own base station is higher than said first threshold value, said base station transmits said power control signal for instructing the terminal station to decrease the transmission power (If a first control command is transmitted from a main base station to the mobile station for reducing power, power is reduced based on that a measured signal interference value is greater than a reference signal interference ratio; *col. 13, line 57 thru col. 14*) and, in the case where the received power of radio waves transmitted from said terminal station is lower than said first threshold value, the base station transmits a power control signal for giving an instruction increase the transmission power to stop said power control signal to the terminal station (A first control command for increasing power transmitted to a mobile station after determining that a measured signal interference ratio from the mobile station is smaller than a target signal interference ratio; *col. 13, line 57 thru col. 14, line 38*).



Hamabe fails to clearly specify the terminal station transmitting a signal on which an identification code for identifying the base station is superimposed.

In the same field of endeavor, Mochizuki discloses a transmission power control method wherein a mobile terminal measures propagation characteristics of a common pilot channel transmitted by base stations and selects which of the base stations gives better common pilot signal characteristics and notifies the base stations of the ID of this base station in addition to transmitting a transmission power control (TPC) command that instructs an increase or increase in the transmission power (*Page 5, Paragraphs 128-134*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Hamabe method for controlling transmission power for both the base station and the mobile terminal to include the ID or identifier of a selected base station a transmission power control command as taught by Mochizuki for the purpose of avoiding unnecessary data transmission to unintended base stations consequently increasing efficiency for frequency utilization.

Regarding **claim 5**, Hamabe discloses a base station for transmitting a power control signal for controlling transmission power of a terminal station in a wireless communication system including a plurality of base stations and a plurality of terminal stations (*Fig. 7*), each of the base stations, for measuring received powers of radio waves transmitted from said plurality of terminal stations (*Fig. 11, items 13-16*) and, when the measured received power is higher than a first threshold value, transmitting a power-down control signal for instructing the terminal station which has transmitted the radio wave to decrease the transmission power, and each of the terminal stations for decreasing the transmission power when there is said power-down control

Art Unit: 2686

signal in at least one signal sent from the base stations (A first control command for reducing power transmitted to a mobile station after determining that a measured signal interference ratio from the mobile station is greater than a target signal interference ratio; *col. 13, line 57 thru col. 14, line 38*), increasing the transmission power when said power-down control signal does not exist (If all first control commands transmitted from the base stations to a mobile station undergoing handoff are for increasing transmission power, that is whose signal to interference ratios are greater than a reference level, then the mobile station increases transmission power; *col. 13, line 57 thru col. 14, line 38; col. 17, lines 33-44*), comparing received powers of radio waves transmitted from the base stations with each other (Each base station transmitting perch channel signals, and the mobile stations measuring the power of the perch channel signals; *col. 12, lines 13-18*), selecting the base station which has transmitted the radio waves with the highest power (*col. 12, lines 39-52; col. 13, lines 7-14*), wherein the base station for use in a transmission power control system comprises: a received power measuring part for measuring a received power of radio waves transmitted from a specific terminal station (*Fig. 11, item 13*); a first threshold memorizing part for holding said first threshold value (A target reception quality level; *col. 13, lines 61-64*); a comparing part for comparing the received power measured by said received power measuring part with said first threshold value (*Fig. 11, item 13*); and power control signal generating means for generating, in accordance with a result of said comparing part (*Fig. 11, item 15*), a power-down control signal for instructing said specific terminal station to decrease the transmission power when said measured received power is higher than said first threshold (If a first control command is transmitted from a main base station to the mobile station for reducing power, power is reduced based on that a measured signal interference value is

Art Unit: 2686

greater than a reference signal interference ratio; *col. 13, line 57 thru col. 14*), and generating a power-up control signal for giving an instruction to increase transmission power to said specific terminal station, when the received power of radio waves transmitted from said specific terminal station is lower than said first threshold value (A first control command for increasing power transmitted to a mobile station after determining that a measured signal interference ratio from the mobile station is smaller than a target signal interference ratio; *col. 13, line 57 thru col. 14, line 38*).

Hamabe fails to clearly specify the terminal station transmitting a signal on which an identification code for identifying the base station is superimposed.

In the same field of endeavor, Mochizuki discloses a transmission power control method wherein a mobile terminal measures propagation characteristics of a common pilot channel transmitted by base stations and selects which of the base stations gives better common pilot signal characteristics and notifies the base stations of the ID of this base station in addition to transmitting a transmission power control (TPC) command that instructs an increase or increase in the transmission power (*Page 5, Paragraphs 128-134*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Hamabe method for controlling transmission power for both the base station and the mobile terminal to include the ID or identifier of a selected base station a transmission power control command as taught by Mochizuki for the purpose of avoiding unnecessary data transmission to unintended base stations consequently increasing efficiency for frequency utilization.

Art Unit: 2686

Regarding **claim 6**, Hamabe discloses a base station for transmitting a power control signal for controlling transmission power of a terminal station in a wireless communication system including a plurality of base stations and a plurality of terminal stations (*Fig. 7*), each of the base stations, for measuring received powers of radio waves transmitted from the terminal stations (*Fig. 11, items 13-16*) and, when the measured received power is higher than a first threshold value, transmitting a power-down control signal for instructing the terminal station which has transmitted the radio wave to decrease the transmission power, and each of the terminal stations for decreasing the transmission power when there is said power-down control signal in at least one signal sent from the base stations (A first control command for reducing power transmitted to a mobile station after determining that a measured signal interference ratio from the mobile station is greater than a target signal interference ratio; *col. 13, line 57 thru col. 14, line 38*), increasing the transmission power when said power-down control signal does not exist, comparing received powers of radio waves transmitted from the base stations with each other (If all first control commands transmitted from the base stations to a mobile station undergoing handoff are for increasing transmission power, that is whose signal to interference ratios are greater than a reference level, then the mobile station increases transmission power; *col. 13, line 57 thru col. 14, line 38; col. 17, lines 33-44*), selecting the base station which has transmitted the radio waves with the highest power (), wherein the base station for use in a transmission power control system comprises a signal processing circuit (*col. 12, lines 13-52; col. 13, lines 7-14*), for performing the following process by a program, the process for measuring a received power of radio waves transmitted from a specific terminal station (*Fig. 11, item 13*), comparing the received power measured by said received power measuring part

Art Unit: 2686

with said first threshold value (A target reception quality level; *col. 13, lines 61-64; Fig. 11, items 13 and 15*), in accordance with a result of said comparing part, generating a power-down control signal for instructing said specific terminal station to decrease the transmission power when said measured received power is higher than said first threshold (If a first control command is transmitted from a main base station to the mobile station for reducing power, power is reduced based on that a measured signal interference value is greater than a reference signal interference ratio; *col. 13, line 57 thru col. 14*), and generating a power-up control signal for giving an instruction to increase the transmission power of said specific terminal station, when the received power of radio waves transmitted from said specific terminal station is lower than said first threshold value (A first control command for increasing power transmitted to a mobile station after determining that a measured signal interference ratio from the mobile station is smaller than a target signal interference ratio; *col. 13, line 57 thru col. 14, line 38*).

Hamabe fails to clearly specify the terminal station transmitting a signal on which an identification code for identifying the base station is superimposed.

In the same field of endeavor, Mochizuki discloses a transmission power control method wherein a mobile terminal measures propagation characteristics of a common pilot channel transmitted by base stations and selects which of the base stations gives better common pilot signal characteristics and notifies the base stations of the ID of this base station in addition to transmitting a transmission power control (TPC) command that instructs an increase or increase in the transmission power (*Page 5, Paragraphs 128-134*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Hamabe method for controlling transmission power for both the

Art Unit: 2686

base station and the mobile terminal to include the ID or identifier of a selected base station a transmission power control command as taught by Mochizuki for the purpose of avoiding unnecessary data transmission to unintended base stations consequently increasing efficiency for frequency utilization.

17. **Claims 2, 3-4, and 7-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamabe (U.S Pat. No. 6,405,021) in view of Mochizuki (U.S. P.G.-Pub. No. 2002/0082038), further in view of Miyamoto (U.S Pat. No. 6,628,924).

Regarding **claim 2**, Hamabe disclose a method of controlling transmission power of a terminal station in a wireless communication system including a plurality of base stations and a plurality of terminal stations (*Fig. 7*), each base station for measuring received powers of radio waves transmitted from terminal stations (*Fig. 11, items 13-16*) and, when the measured received power is higher than a first threshold value which is set by a predetermined procedure, instructing the terminal station which has transmitted the radio wave to decrease the transmission power (A first control command for reducing power transmitted to a mobile station after determining that a measured signal interference ratio from the mobile station is greater than a target signal interference ratio; *col. 13, line 57 thru col. 14, line 38*), and each of the terminal stations for decreasing the transmission power when at least one power control signal which gives an instruction to decrease in the transmission power exists in signals transmitted from the base stations (Producing a first control command signal for reducing power and transmitting such to a mobile station; *col. 13, line 57 thru col. 14, line 38*), increasing the transmission power when said power control signal for giving an instruction to decrease the

Art Unit: 2686

transmission power does not exist (If all first control commands transmitted from the base stations to a mobile station undergoing handoff are for increasing transmission power, that is whose signal to interference ratios are greater than a reference level, then the mobile station increases transmission power; *col. 13, line 57 thru col. 14, line 38; col. 17, lines 33-44*), comparing received powers of radio waves transmitted from the base stations with each other (Each base station transmitting perch channel signals, and the mobile stations measuring the power of the perch channel signals; *col. 12, lines 13-18*), selecting the base station which has transmitted the radio waves with the highest power (*col. 12, lines 39-52; col. 13, lines 7-14*), in the case where the received power of the radio waves transmitted from a terminal station is higher than said first threshold value, a base station transmits said power control signal for instructing the terminal station to decrease the transmission power (If a first control command is transmitted from a main base station to the mobile station for reducing power, power is reduced based on that a measured signal interference value is greater than a reference signal interference ratio; *col. 13, line 57 thru col. 14*), in the case where the received power of the radio waves transmitted from said terminal station is lower than said first threshold value, the base station transmits a power control signal increasing the transmission power to the terminal station (A first control command for increasing power transmitted to a mobile station after determining that a measured signal interference ratio from the mobile station is smaller than a target signal interference ratio; *col. 13, line 57 thru col. 14, line 38* ),

Hamabe fails to clearly specify the terminal station transmitting a signal on which an identification code for identifying the base station is superimposed, wherein a second threshold value larger than said first threshold value is set in each of the base stations by a predetermined

Art Unit: 2686

procedure, and furthermore where in the case where the received power of the radio waves transmitted from the terminal station is higher than said second threshold value when said identification code transmitted from said terminal station indicates another station, the base station transmits said power control signal for instructing the terminal station to decrease the transmission power, and in the case where the received power of the radio waves transmitted from the terminal station is lower than said second threshold value when said identification code transmitted from said terminal station indicates another station, the base station stop to transmit a power control signal to the terminal station, or transmits a power control signal increasing transmission power to the terminal station.

In the same field of endeavor, Mochizuki discloses a transmission power control method wherein a mobile terminal measures propagation characteristics of a common pilot channel transmitted by base stations and selects which of the base stations gives better common pilot signal characteristics and notifies the base stations of the ID of this base station in addition to transmitting a transmission power control (TPC) command that instructs an increase or increase in the transmission power (*Page 5, Paragraphs 128-134*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Hamabe method for controlling transmission power for both the base station and the mobile terminal to include the ID or identifier of a selected base station a transmission power control command as taught by Mochizuki for the purpose of avoiding unnecessary data transmission to unintended base stations consequently increasing efficiency for frequency utilization.



Hamabe in view of Mochizuki fail to clearly specify wherein a second threshold value larger than said first threshold value is set in each of the base stations by a predetermined procedure, and furthermore where in the case where the received power of the radio waves transmitted from the terminal station is higher than said second threshold value when said identification code transmitted from said terminal station indicates another station, the base station transmits said power control signal for instructing the terminal station to decrease the transmission power, and in the case where the received power of the radio waves transmitted from the terminal station is lower than said second threshold value when said identification code transmitted from said terminal station indicates another station, the base station stop to transmit a power control signal to the terminal station, or transmits a power control signal increasing transmission power to the terminal station.

In the same field of endeavor, Miyamoto discloses a method for controlling a threshold value (signal to interference ratio (SIR) reference value) used for closed loop control wherein a mobile station is simultaneously communicating to a plurality of base stations, each base station having a respective threshold or SIR reference value for controlling transmission power from the mobile station to the base station, wherein one of the plurality of the base stations is closer to the mobile station, thus a radio wave from said one base station reaching the mobile station at a stronger level than the rest, furthermore where in the case said one base station reaching the mobile station at a stronger level sends a decrease power transmission instruction while another base station from the rest sends an increase power transmission instruction, the mobile station precede the decrease instruction from the base station with a stronger level thus causing an increment in the threshold value or reference value from the base station transmitting an

Art Unit: 2686

increase power transmission instruction ("Having an updated reference value larger than the previous one at the base station"). Alternatively if said both one base station reaching the mobile station at stronger level than rest and another base station from the rest send an increase command instruction or a decrease command instruction to the mobile station when there is no conflict between the two respective reference values the command instruction is conveyed at the mobile station ("Increasing or Decreasing transmission power indicated by another base station") (*col. 13, line 37 thru col. 15, line 36; col. 26, lines 19-63*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Hamabe in view of Mochizuki method for controlling transmission power for both the base station and the mobile terminal using the ID or identifier of a selected base station to have power control transmission decision uphold at different reference values as taught by Miyamoto for the purpose of avoiding unnecessary power transmission increase, thus avoiding excess interference occurrence as well, overall improving the quality of service.

Regarding **claims 3 and 4**, and as each applied to either claims 1 or 2, Hamabe in view of Mochizuki disclose the aforementioned transmission power control method. Hamabe in view of Mochizuki fail to clearly specify wherein said plurality of base stations are connected to a switching network through a common base station control device, and at least one of said first threshold value is set via said base station control device switching network through the common base station control device.

In the same field of endeavor, Miyamoto disclose a method for controlling a threshold value (signal to interference ratio (SIR) reference value) used for closed loop control wherein a mobile station is simultaneously communicating to a plurality of base stations, the base stations

Art Unit: 2686

connected to a common base station control device (radio network controller (RNC)) which is a host station through network lines setting signal to interference ratio reference values at the base stations (*col. 26, lines 19-63*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Hamabe in view of Mochizuki method for controlling transmission power for both the base station and the mobile terminal using the ID or identifier of a selected base station to have a common control device controlling power transmission in a diversity hand-over state as taught by Miyamoto for the purpose of collectively relaying transmission information and setting appropriate common reference threshold values in each of the base stations according to a common control device.

Regarding **claim 7**, and as applied to claim 5, Hamabe in view of Mochizuki disclose the aforementioned base station. Hamabe in view of Mochizuki fail to clearly specify said base station further comprising means for setting a second threshold value higher than said first threshold value, wherein said power control signal generating means transmits a power-down control signal for instructing said specific terminal station to decrease transmission power in the case where said identification code sent from said specific terminal station indicates another station and the received power of the radio wave transmitted from said specific terminal station is higher than said second threshold value, and a power-up control signal for giving an instruction to increase the transmission power of said specific terminal stationer transmits a power-up control signal for giving an instruction to increase the transmission power of said specific terminal station when said received power is lower than said second threshold value.

In the same field of endeavor, Miyamoto discloses a method for controlling a threshold value (signal to interference ratio (SIR) reference value) used for closed loop control wherein a mobile station is simultaneously communicating to a plurality of base stations, each base station having a respective threshold or SIR reference value for controlling transmission power from the mobile station to the base station, wherein one of the plurality of the base stations is closer to the mobile station, thus a radio wave from said one base station reaching the mobile station at a stronger level than the rest, furthermore where in the case said one base station reaching the mobile station at a stronger level sends a decrease power transmission instruction while another base station from the rest sends an increase power transmission instruction, the mobile station precede the decrease instruction from the base station with a stronger level thus causing an increment in the threshold value or reference value from the base station transmitting an increase power transmission instruction ("Having an updated reference value larger than the previous one at the base station"). Alternatively if said both one base station reaching the mobile station at stronger level than rest and another base station from the rest send an increase command instruction or a decrease command instruction to the mobile station when there is no conflict between the two respective reference values the command instruction is conveyed at the mobile station ("Increasing or Decreasing transmission power indicated by another base station") (*col. 13, line 37 thru col. 15, line 36; col. 26, lines 19-63*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Hamabe in view of Mochizuki method for controlling transmission power for both the base station and the mobile terminal using the ID or identifier of a selected base station to have power control transmission decision uphold at different reference values as

Art Unit: 2686

taught by Miyamoto for the purpose of avoiding unnecessary power transmission increase, thus avoiding excess interference occurrence as well, overall improving the quality of service.

Regarding **claim 8**, and as applied to claim 6, Hamabe in view of Mochizuki disclose the aforementioned base station. Hamabe in view of Mochizuki fail to clearly specify said base station further comprising means for setting a second threshold value higher than said first threshold value, wherein a signal processing circuit executed by said program performs the following process by a program, the process for transmitting a power-down control signal for instructing said specific terminal station to decrease transmission power in the case where said identification code sent from said specific terminal station indicates another station and the received power of the radio wave transmitted from said specific terminal station is higher than said second threshold value, and stops to send a power control signal or transmitting a power-up control signal for giving an instruction to increase the transmission power of said specific terminal station when said received power is lower than said second threshold value.

In the same field of endeavor, Miyamoto discloses a method for controlling a threshold value (signal to interference ratio (SIR) reference value) used for closed loop control wherein a mobile station is simultaneously communicating to a plurality of base stations, each base station having a respective threshold or SIR reference value for controlling transmission power from the mobile station to the base station, wherein one of the plurality of the base stations is closer to the mobile station, thus a radio wave from said one base station reaching the mobile station at a stronger level than the rest, furthermore where in the case said one base station reaching the mobile station at a stronger level sends a decrease power transmission instruction while another base station from the rest sends an increase power transmission instruction, the mobile station

Art Unit: 2686

precede the decrease instruction from the base station with a stronger level thus causing an increment in the threshold value or reference value from the base station transmitting an increase power transmission instruction ("Having an updated reference value larger than the previous one at the base station"). Alternatively if said both one base station reaching the mobile station at stronger level than rest and another base station from the rest send an increase command instruction or a decrease command instruction to the mobile station when there is no conflict between the two respective reference values the command instruction is conveyed at the mobile station ("Increasing or Decreasing transmission power indicated by another base station") (*col. 13, line 37 thru col. 15, line 36; col. 26, lines 19-63*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Hamabe in view of Mochizuki method for controlling transmission power for both the base station and the mobile terminal using the ID or identifier of a selected base station to have power control transmission decision uphold at different reference values as taught by Miyamoto for the purpose of avoiding unnecessary power transmission increase, thus avoiding excess interference occurrence as well, overall improving the quality of service.

### ***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Takeo, (U.S. Pat. No. US006385183B1), CDMA Power Control System.
- b. Lindroth et al. (US005887245A), Method and Apparatus for Regulating Transmission Power.

Art Unit: 2686

- c. Li et al. (U.S. Pat. No. 6,185,431), Mobile Station Closed Loop Output Power Stability System for Weak Signal Conditions.
- d. Gilhousen et al. (U.S. Pat. No. 5,485,486), Method and Apparatus for Controlling Transmission Power in a CDMA Cellular Mobile Telephone System.
- e. Damnjanovic et al. (U.S. P.G.-Pub. No. 2003/0050084), Reverse Link Power Control in 1XEV-DV Systems.

19. Any response to this Office Action should be **faxed to** (703) 872-9306 or **mailed to:**

Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

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Crystal Park II

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Arlington, VA 22202

Sixth Floor (Receptionist)

20. Any inquiry concerning this communication on earlier communications from the Examiner should be directed to Ismael Quiñones whose telephone number is (703) 305-8997.

The Examiner can normally be reached on Monday-Friday from 8:00am to 5:00pm.

Art Unit: 2686

21. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379, and fax number is (703) 746-9818. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9301.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose number is (703) 305-4700 or call customer service at (703) 306-0377.

*Ismael Quiñones*

I.Q.

August 26, 2004

  
9/2/04  
LESTER G. KINCAID  
PRIMARY EXAMINER